THE SOCIAL MATURITY OF THE VISUALLY HANDICAPPED PRESCHOOL CHILD, by

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# THE SOCIAL MATURITY OF THE VISUALLY HANDICAPPED PRESCHOOL CHILD[1]

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No satisfactory diagnostic instrument has been available for use in measuring the development of very young visually handicapped children. The Hayes-Binet Test has proved valuable for testing the intelligence of blind children who are 6 years old or more, but it does not go below the 3-year level and is not as well standardized below year 6 as above that age level. With partially seeing children the tests and scales for the seeing sometimes can, sometimes cannot, be used effectively. Often they should be supplemented in order to check the child's performance in terms of his degree of vision and in terms of his ability to get along as an independent human being of a given length of life experience. Unfortunately no such supplementary instrument has heretofore been available for use with blind and low-visioned children under school age.

It can scarcely be hoped, because of the complexity of the problem, that any single diagnostic instrument will be adequate to meet this need. There is a growing realization that even in work with seeing children, such instruments should be used as guides and not as absolute measures. However, when the Vineland Social Maturity Scale appeared, it gave promise as an indicator of growth in social competence for small visually handicapped children even though it was intended originally for use with the seeing.

The use of this Scale was inaugurated, for the purpose of studying its value, as a part of the regular routine at the Arthur Sunshine Home and Nursery School for the Blind in 1935. In 1938, financial difficulties necessitated the closing of the Arthur Home, thus also bringing to a temporary close our work on the study of the Vineland Social Maturity Scale.

On both the first and the second projects there has been splendid cooperation from agencies for the blind having preschool children under their care. Grateful appreciation is expressed to the following organizations: The New York Association for the Blind, the New York State Bureau of Services for the Blind, the Connecticut School for the Blind, the Boston Nursery for Blind Babies, and the Pennsylvania Institution for the Instruction of the Blind. Several parents also cooperated.

Before the close of the first period, at the suggestion of Dr. Doll, Mrs. Bradway spent sufficient time at the Arthur Home to give valuable suggestions on procedures and interpretations. She had already made a study at the Pennsylvania Institution for the Instruction of the Blind which gave her considerable insight into the problems involved (3).

[1]*The extension and completion of this study was made possible through a grant-in-aid to Dr. Maxfield by the Social Science Research Council.*

*The authors are grateful to Dr. Edgar A. Doll for his generous offers of assistance throughout the project and for his critical review of the manuscript.*

*Since the full report is too long for publication, two copies of it, in manuscript form, have been placed on file in the Lending Library of the American Foundation for the Blind, 15 West 16th Street, New York City.*



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## THE PROBLEM

The purposes of the project have been: first, to evaluate the Vineland Social Maturity Scale as a useful measure of the general social competence of visually handicapped preschool children; second, to work toward a tentative revision of the Scale which would make it more adequate for comparing visually handicapped children with each other; and third, to discover specific items on which visually handicapped children are retarded and which might serve as bases for future studies.

To accomplish these purposes the data have been treated in three different ways. First, a quantitative investigation was made, the results of which were merely indicative, owing to the wide variability among relatively few subjects; second, seventeen case histories were studied, each in relation to a series of ratings on the Social Maturity Scale, and third, an evaluation of the individual items was made on the basis of all available material.

## METHOD AND PROCEDURE

Materials. As has already been indicated, the Vineland Social Maturity Scale was the chief instrument used in this study (7). According to Dr. Doll it covers an unlimited age range but standardizes normatively from birth to 30 years, with the average adult ceiling at 25 years. Sixty-five items fall below the 7-year level.[2] The Scale was standardized on seeing people.

Doll, who supervised its construction, states: "The items of the Scale avoid the measurement of intelligence, personality, habits, skill, and the like, as such, focusing instead on the composite capitalization of such abilities for socially significant behavior" (5). In other words, it aims to be a measure of what might be called effective social behavior. Bradway, in her study of 300 feebleminded subjects, found a correlation of .85 between social age and mental age, and she states that, on the average, children of high intelligence would be expected to obtain higher absolute scores but lower relative scores than would children of low intelligence (2).

The whole Scale consists of 117 items, only the first 77 of which were used for this study. The 77th item was chosen as the end of the series because it was the last item in that year level which contained the last plus score for any of the children in our group. The items are numbered in order of increasing average difficulty as found for the normal seeing children used in Doll's study (5). They are grouped by age levels with from 3 to 17 items at each level. Furthermore, the items have been classified under the following categories:

| | | |
|---|---|---|
| Self-Help, General (SHG) | Locomotion (L) | Self-Direction (SD) |
| Eating (SHE) | Occupation (O) | Socialization (S) |
| Dressing (SHD) | Communication (C) | |

[2] *For purposes of this study 7 years has been considered the upper limit of the preschool age, because of the fact that visually handicapped children are likely to be retarded in entering first grade.*

The items arranged according to age-levels, for the section of the Scale we have used, are as follows:

0 - I

| | | |
|---|---|---|
| C | 1. | "Crows"; laughs |
| SHG | 2. | Balances head |
| SHG | 3. | Grasps objects within reach |
| S | 4. | Reaches for familiar persons |
| SHG | 5. | Rolls over |
| SHG | 6. | Reaches for nearby objects |
| O | 7. | Occupies self unattended |
| SHG | 8. | Sits unsupported |
| SHG | 9. | Pulls self upright |
| C | 10. | "Talks"; imitates sounds |
| SHE | 11. | Drinks from cup or glass assisted |
| L | 12. | Moves about on floor |
| SHG | 13. | Grasps with thumb and finger |
| S | 14. | Demands personal attention |
| SHG | 15. | Stands alone |
| SHE | 16. | Does not drool |
| C | 17. | Follows simple instructions |

I - II

| | | |
|---|---|---|
| L | 18. | Walks about room unattended |
| O | 19. | Marks with pencil or crayon |
| SHE | 20. | Masticates food |
| SHD | 21. | Pulls off socks |
| O | 22. | Transfers objects |
| SHG | 23. | Overcomes simple obstacles |
| O | 24. | Fetches or carries familiar objects |
| SHE | 25. | Drinks from cup or glass unassisted |
| SHG | 26. | Gives up baby carriage |
| S | 27. | Plays with other children |
| SHE | 28. | Eats with spoon |
| L | 29. | Goes about house or yard |
| SHE | 30. | Discriminates edible substances |
| C | 31. | Uses names of familiar objects |
| L | 32. | Walks upstairs unassisted |
| SHE | 33. | Unwraps candy |
| C | 34. | Talks in short sentences |

II - III

| | | |
|---|---|---|
| SHG | 35. | Asks to go to toilet |
| O | 36. | Initiates own play activities |
| SHD | 37. | Removes coat or dress |
| SHE | 38. | Eats with fork |
| SHE | 39. | Gets drink unassisted |
| SHD | 40. | Dries own hands |
| SHG | 41. | Avoids simple hazards |

SHD 42. Puts on coat or dress unassisted
O 43. Cuts with scissors
C 44. Relates experiences

III - IV

L 45. Walks downstairs one step per tread
S 46. Plays cooperatively at kindergarten level
SHD 47. Buttons coat or dress
O 48. Helps at little household tasks
S 49. "Performs" for others
SHD 50. Washes hands unaided

IV - V

SHG 51. Cares for self at toilet
SHD 52. Washes face unassisted
L 53. Goes about neighborhood unattended
SHD 54. Dresses self except tying
O 55. Uses pencil or crayon for drawing
S 56. Plays competitive exercise games

V - VI

O 57. Uses skates, sled, wagon
C 58. Prints simple words
S 59. Plays simple table games
SD 60. Is trusted with money
L 61. Goes to school unattended

VI - VII

SHE 62. Uses table knife for spreading
C 63. Uses pencil for writing
SHD 64. Bathes self assisted
SHD 65. Goes to bed unassisted

VII - VIII

SHG 66. Tells time to quarter hour
SHE 67. Uses table knife for cutting
S 68. Disavows literal Santa Claus
S 69. Participates in pre-adolescent play
SHD 70. Combs or brushes hair

VIII - IX

O 71. Uses tools or utensils
O 72. Does routine household tasks
C 73. Reads on own initiative
SHD 74. Bathes self unaided

IX - X

SHE 75. Cares for self at table
SD 76. Makes minor purchases
L 77. Goes about home town freely

Each total score can be translated into a Social Age, or Age Equivallent, and by dividing this Social Age by the life age and multiplying by 100, it is possible to obtain a Social Quotient (SQ), or an index somewhat comparable to the IQ. The mean SQ for normal seeing children was found to be approximately 100.

Additional material obtained from the other records of the children at the Arthur Home was utilized in this study. This material includes records of physical condition, of behavior, of progress in the nursery school, and of various factors which might affect emotional stability.

Subjects. A total of 101 visually handicapped children ranging in age from 9 months to 6 years and 10 months was used. They varied in mental ability from an extremely low level to very superior. They ranged in vision from total blindness to a degree of sight which made it possible for them to get about independently.

Pertinent characteristics of the children are shown in Table 1. The main group, of 92 subjects, used in the quantitative analysis has been designated as Group I. These 92 children have been roughly classified according to mental ability and degree of vision.[3]

The classification of the children according to intelligence was of necessity rather arbitrary. The lack of a satisfactory instrument for measuring the intelligence of visually handicapped preschool children has already been discussed. Under the circumstances the best that could be done was to divide these subjects into three general groups, superior, normal, and retarded. Those children who could reasonably be so placed were included in the normal group. Most of the subjects had been known and observed by experienced workers over a sufficiently long period of time to justify their classification on this general basis. For a few of the older subjects fairly satisfactory Hayes-Binet scores were available.

The children were also classified according to degree of visual handicap. It is extremely difficult, often impossible, to be sure of the degree of visual defect in very young subjects except in cases such as enucleation or anophthalmos. For purposes of this study, those having no vision or only light perception were classified as blind, whereas those who had what appeared to be a usable degree of sight were classified as having partial vision.

Procedure. The data include material gathered under the auspices of the Arthur Home, together with additional records obtained after the beginning of work on the present project, through the excellent cooperation given by a few private families and by the organizations mentioned earlier in this report. All of the recordings were made by trained workers who had at one time been connected with the Arthur Home, except

*3The full report discusses more fully the characteristics of the children.*

for those obtained through the New York State Bureau of Services for the Blind. After careful study, Miss Gertrude Van den Broek of the Bureau, graciously consented to take these records on children whom she was visiting throughout the State.

TABLE 1

VARIOUS CHARACTERISTICS OF THE 101 SUBJECTS IN THIS STUDY

| Groups | Total | Boys | Girls | Colored | Additional Handicaps | Premature | Serious Illnesses | Progressive Visual Loss | Vision Improved | Visual Defect Noticed Within: 2 weeks | 1 year | 2 years | 3 years | 5 years | Unknown |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Group | 101 | 61 | 40 | 12 | 15 | 5 | 42 | 4 | 20 | 60 | 22 | 3 | 3 | 1 | 12 |
| I. Prin. Group | 92 | 57 | 35 | 12 | 14 | 5 | 38 | 4 | 19 | 53 | 20 | 3 | 3 | 1 | 12 |
| a. Superior | 16 | 12 | 4 | 1 | 3 | 1 | 6 | 2 | 4 | 6 | 5 | 1 | 0 | 0 | 4 |
| b. Normal | 55 | 27 | 28 | 6 | 5 | 1 | 21 | 2 | 12 | 34 | 11 | 2 | 3 | 1 | 4 |
| c. Retarded | 21 | 18 | 3 | 5 | 6 | 3 | 11 | 0 | 3 | 13 | 4 | 0 | 0 | 0 | 4 |
| x. Part. Seeing | 46 | 24 | 22 | 6 | 5 | 1 | 14 | 0 | 15 | 29 | 9 | 2 | 0 | 0 | 6 |
| y. Blind | 46 | 33 | 13 | 6 | 9 | 4 | 24 | 4 | 4 | 24 | 11 | 1 | 3 | 1 | 6 |
| II. Very Retarded Group | 7 | 4 | 3 | 0 | 0 | 0 | 4 | 0 | 1 | 6 | 1 | 0 | 0 | 0 | 0 |
| III. Special Cases | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |

Records of the Arthur Home children were taken at approximately 3-month intervals. From one to 12 records were made for each child, the actual number depending upon the length of residence in the Home after the use of the Scale was adopted. Similar series were obtained on a few other children. In addition, single records were available for a considerable number of subjects.

## RESULTS AND THEIR EVALUATION

### I. Quantitative Results

The quantitative analyses are based on single records obtained on 99 subjects ranging in mentality from very retarded to superior, and on longitudinal data consisting of a series of 3 records each for 31 subjects.

#### A. Principal Results

1. The visually handicapped versus the seeing preschool child. The first task was to compare the behavior of young visually handicapped children with that of normal seeing children of corresponding ages as shown by their scores on the Vineland Social Maturity Scale. The 92 subjects, (Group I), used for this purpose ranged in age from 9 months

to 6 years, 10 months and in intelligence from retarded to superior (Table 1).

Table 2, which is not presented here, gives the number of subjects at each life-age level according to groups.

Table 3, which is also omitted, gives gross data regarding life age, social age, and social quotient. As might be expected, it was found that these children average considerably lower in SQ than do normal seeing children, that is, 83.54 for the handicapped as compared to approximately 100 for the seeing children. Even more striking is the extreme variability of the handicapped children as is shown by an S.D. of ± 29.28 and a range of 26 - 163. It was found that the average (83.52) for the normal handicapped group (Group I-B) was about the same as for the whole of Group I and although the S.D. and range were considerably reduced (±18.45 and 40 - 119) they were still very large. Likewise the superior and retarded groups (I-a and c) showed wide variability. It is this extreme variability which makes it doubly necessary to judge with care when working with young visually handicapped children.

Since the items are arranged on the Scale in order of difficulty for seeing children, it was possible to make a comparison between the seeing and the visually handicapped group on the basis of rank order of difficulty of the individual items. This showed whether there were specific items which stood out as particularly difficult or as comparatively easy for the handicapped group, and whether these items clustered together into any sort of pattern.

There were 29 items on which the visually handicapped group differed from the Scale by as much as, or more than, five points in rank order of difficulty. Fifteen of these were relatively easier and 14 relatively more difficult for the handicapped group. It should be pointed out, however, that while the items are presumably arranged on the Scale in order of difficulty for normal seeing children, there is no claim that the steps are of equally increasing difficulty. Thus, a difference of 5 points in order of difficulty may mean a big difference at one point on the Scale and a much smaller difference at another point. Nevertheless, a shift in rank order of as much as 5 points seems to suggest possible significance since the number of items at any single year level is not great.

A close scrutiny of the 29 items mentioned above is of interest. The 14 items which were relatively more difficult for the visually handicapped children than for the seeing children by a difference of more than 5 points are given below. These items are listed under the categories in which they belong in the Scale, in order to disclose any possibility of groupings of this type. The number in parenthesis following the category name indicates the total number of items in the category within the range of the 77 items included in this analysis. The number in parenthesis following each item indicates the number of points' difference in rank order of difficulty compared with the Scale as standardized on normal seeing children.

Self-Help
  General (14 items)
    66. Tells time to quarter hour (9.5)

Eating (12 items)
28. Eats with spoon (5)
33. Unwraps candy (6)
38. Eats with fork (9)
Dressing (12 items)
47. Buttons coat or dress (5)
Locomotion (8 items)
Occupation (11 items)
19. Marks with pencil (15)
22. Transfers objects (8)
24. Fetches or carries familiar objects (8)
43. Cuts with scissors (10)
Communication (9 items)
10. "Talks"; imitates sounds (5)
58. Prints simple words (10)
63. Uses pencil for writing (8)
Self-Direction (2 items)
Socialization (9 items)
4. Reaches for familiar persons (10)
59. Plays simple table games (10)

The fifteen items relatively easier for the visually handicapped group as shown by a difference of 5 points or more in rank order of difficulty are as follows:

Self-Help
General (14 items)
8. Sits unsupported (6)
26. Gives up baby carriage (7)
41. Avoids simple hazards (5)
Eating (12 items)
16. Does not drool (6)
30. Discriminates edible substances (6)
Dressing (12 items)
50. Washes hands unaided (9.5)
64. Bathes self assisted (8)
70. Combs or brushes hair (8.5)
74. Bathes self unaided (8)
Locomotion (8 items)
Occupation (11 items)
36. Initiates own play activities (5)
57. Uses skates, sled, wagon (6.5)
72. Does routine household tasks (7)
Communication (9 items)
31. Uses names of familiar objects (5.5)
34. Talks in short sentences (6)
Self-Direction (2 items)
Socialization (9 items)
27. Plays with other children (5)

Examination of the two lists of items shows that there are no Loco-

motion or Self-Direction items in either list. This does not seem particularly significant in the case of the Self-Direction Category, since there are only two such items among the entire 77 items used. However, the lack of any Locomotion items which differ in order of difficulty by as much as 5 points may mean that for these handicapped children the development of locomotion retains about the same relationship to general development as in the case of seeing children.

The largest number of items differing by 5 points or more in rank order of difficulty fall under Occupation, Communication, Eating and Dressing. Three of the Occupation items fall in the relatively easier group, while 4 fall in the relatively more difficult. Two of the latter that is, 19 and 43, would obviously be very difficult for visually handicapped children, if only because the first might often seem to parents a meaningless activity for children with little or no vision, and because the second would impress many as being too dangerous a performance. Two of the Communication items are in the easier list, and 3 in the more difficult. Here again, items 58 and 63 would obviously be difficult for the visually handicapped. In comparing the eating items, it will be noticed that those on the relatively more difficult list require more activity and manipulation than those on the easier list. On the whole, the dressing items seem to be relatively easier for the handicapped group. This is particularly true of the later dressing items.

This study of the relatively easier items revealed a tendency for the visually handicapped, other things being equal, to succeed more frequently on items requiring less initiative, less activity and less aggressiveness. This tendency is somewhat masked by the presence of a few items which require no great initiative but which are especially difficult for the totally blind since the described behaviour has little meaning for them. While the use of hammer and nails was allowed in some instances for 43, the fashioning of objects in clay for 55, the printing of words in braille for 58, and the more advanced use of braille for 63, the substitutions have not been standardized and on the whole are probably more difficult than are the original items for seeing children.

It should be pointed out that item 27 does not require any great initiative or cooperation on the part of the child but merely that he play in the presence of other children without making trouble. As for item 36 some initiative would seem to be required, but experience with blind children of this age indicates that a study of their play behavior would show it to be characterized by relatively less activity than that of seeing children. This would probably be less true of the partially seeing.

Item 57 is definitely an activity item. However, the items it displaces require considerable manipulative skill, the understanding of spatial relationships, the definite use of vision, or an even greater degree of activity.

On surveying the items which were relatively more difficult for the handicapped group there are a few items such as 19, 58 and 63, which may be passed over quickly as being obviously very difficult for the visually handicapped. Items 28, 33, 38, 43 and 47 all require rather delicate manipulation and while they can be carried out without the use of vision, visual perception would greatly simplify the comprehension of the

relationship involved in addition to serving as a guide to successful performance. The behavior of the visually handicapped group as measured by these items as well as by items 22 and 24 may indicate the extreme difficulty with which the blind child is able to grasp the significance of spatial relationships, particularly when those relationships are further complicated by use of external objects. For example, it is easier for the small visually handicapped child to find his way about the house and yard than to manipulate a spoon successfully. Experience has shown that it is extremely difficult for a blind child to learn to scoop up food with a spoon. He can carry the food to his mouth when once the spoon is loaded long before he can learn to do the scooping himself. This is probably because it is very difficult to comprehend, without the use of vision, what goes on at the end of the spoon and the relationship of his hand movements to this end-of-the-spoon activity.

The presence of item 10 in the list of the relatively more difficult would seem to indicate that the visually handicapped child is particularly retarded at this early stage in his linguistic development. Early retardation in the use of language has often been observed by those working with small blind children. However, later linguistic items such as 31, 34, and 44 were relatively easier for this group of handicapped children than for the normal seeing children. This, of course, is not to imply that the blind or partially seeing child is actually as well advanced with regard to these items as is the normal seeing child, but merely that he is less retarded on them than on some others.

As item 4 is worded it represents a type of behavior which is probably meaningless for the totally blind child. He may, and often does, show a desire to be taken up, by whimpering and wriggling, but he will seldom if ever indicate this desire by reaching out. Such signs of recognition as whimpering and wriggling should be given credit, according to the Manual. However it is much more difficult for the seeing adult to interpret such behavior on the part of the blind baby than to interpret the reaching out of a seeing child. It may seem strange, at first thought, that it should be easier for these children to reach for nearby objects than for familiar persons. However, the blind child can learn to find objects by feeling along the surface of the bed or floor, or the sides of his crib, and this is very probably a more meaningful performance than is reaching into air for a person to pick him up, especially since he cannot see the response of the person.

An effort was made to discover the effect of differences in mental abilities by comparing the data for the retarded with those for the superior children. These results are presented in the longer article. They were difficult to interpret due to the fact that 50 per cent of the superior group were partially seeing while only 29 per cent of the retarded group were partially seeing. However, they seem to be in line with those obtained by Doll who found that in comparing the results for normal and feebleminded subjects the Scale was quite consistent as to the progression of items with regard to difficulty (6).

2. The blind versus the partially seeing preschool child. Although there were 46 blind and 46 partially seeing children in Group I, the blind were, on the average, considerably younger than the partially seeing. Consequently, a matched group of 28 blind and 28 partially

seeing subjects were chosen from among those in Group I for closer study. The children were matched for age and as nearly as possible for intelligence. By using the matched pairs it was possible to get a measure of actual difficulty as well as of relative difficulty on the various items for the two groups.

The blind and the partially seeing were closely matched in age since the average age in each case was 4.07 and there were the same number of children at each age level. Table 4, not included here, shows the number of subjects at each age level for the matched groups. The two groups could not be matched as closely for mental level since, as pointed out above, no quantitative measure could be used. However, in each case a child in one group classified as retarded was matched with one of approximately the same age who was classified as retarded in the other group. The same was done with those classified as normal and superior.

Various characteristics of the matched groups are shown in Table 5. The subjects were matched for sex wherever possible, but this could not be carried through completely. It is probable that the discrepancies here were not highly important, since Bradway states that "no item of the revised scale shows a significant sex difference" (1). The blind group is slightly loaded with children having additional handicaps.

Gross data with regard to life age, social age, and social quotient are given in Table 6, which is omitted here. The mean social quotient

TABLE 5

VARIOUS CHARACTERISTICS OF 28 BLIND AND 28 PARTIALLY SEEING MATCHED SUBJECTS

| Groups | Total | Boys | Girls | Colored | Additional Handicaps | Prematurity | Serious Illnesses | Progressive Visual Loss | Improved Vision | Visual Defect Noticed Within: 2 weeks | 1 year | 2 years | 3 years | 5 years | Unknown |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Group 1-0 to 6-11 | | | | | | | | | | | | | | | |
| Part.Seeing | 28 | 15 | 13 | 2 | 2 | 0 | 9 | 0 | 10 | 17 | 7 | 1 | 0 | 0 | 3 |
| Blind | 28 | 21 | 7 | 3 | 5 | 2 | 12 | 0 | 2 | 12 | 8 | 0 | 3 | 1 | 4 |
| Younger Group 1-0 to 3-11 | | | | | | | | | | | | | | | |
| Part.Seeing | 13 | 7 | 6 | 0 | 2 | 0 | 6 | 0 | 5 | 8 | 4 | 0 | 0 | 0 | 1 |
| Blind | 13 | 7 | 6 | 0 | 3 | 2 | 7 | 0 | 2 | 6 | 4 | 0 | 1 | 0 | 2 |
| Older Group 4-0 to 6-11 | | | | | | | | | | | | | | | |
| Part.Seeing | 15 | 8 | 7 | 2 | 0 | 0 | 3 | 0 | 5 | 9 | 3 | 1 | 0 | 0 | 2 |
| Blind | 15 | 14 | 1 | 3 | 2 | 0 | 5 | 0 | 0 | 6 | 4 | 0 | 2 | 1 | 2 |

for the partially seeing is higher than that for the blind. The difference is not statistically reliable, since the groups are small and the variabilities great. Nevertheless, it probably represents a real difference, since it is fairly large, and, in accord with observation, it favors the partially seeing.

A comparative analysis was made of the scores for the blind and the partially seeing on each item in the series from 1 to 77. The comparison was made, first, by a count of the number passing each item and, second, by arranging the items in rank order of difficulty for the blind and for the partially seeing separately. By the first method it was possible to compare the actual difficulty of each item for the two groups. For example, item 31 (Uses names of familiar objects) was passed by 21 of the blind and by 25 of the partially seeing children, showing that this item was more difficult for the blind.

The comparisons of the items at the ends of the series do not actually differentiate the two groups, since the early items are too easy and those at the other extreme too hard. The last two items, as well as items 66 and 73 were failed by all of the subjects.

Although 15 items showed identical scores for the blind and the partially seeing, 4 of these were zero scores and 7 were perfect ones, leaving only 4 which give any measure of comparative difficulty. Twenty-one items showed higher scores (were easier) for the blind children, 19 of them differing from the corresponding scores for the seeing by 0.5 to 2.5 points, and two differing by from 3.0 to 4.5 points. Forty-one showed higher scores for the partially seeing, 27 of them differing from the corresponding scores for the blind by from 0.5 to 2.5 points, 13 differing by from 3.0 to 4.5 points, and 1 by 5 points. Obviously, many of these differences are slight and with a larger number of subjects might be considerably changed.

A detailed study presented in the complete manuscript indicates that the blind children tended to excel in items which require less initiative and less out-going behavior.

The comparison was made on the basis of actual difficulty of the individual items. It is also of interest to determine whether there is a difference between the blind and the partially seeing as to the order of difficulty of the various items. For this reason, a second comparison was made of the paired groups by arranging the items in the order of difficulty as they occured first for the blind and then for the partially seeing, noting those items which showed large differences in relative difficulty. There were 21 items beyond the 0-1 year level which showed a difference of 5 points or more in rank order of difficulty for the two groups of children. Thirteen of these were relatively easier for the partially seeing and 8 for the blind.

All the items that were <u>relatively</u> easier for the blind were found to be included in the previous list of items which were <u>actually</u> easier for them. The same thing holds true for all in the lists for the partially seeing with the exception of two items, Numbers 21 and 29. These two were actually easier for the partially seeing but did not appear in the former list because they differed by less than the three points necessary for inclusion. In other words, the items listed here are both <u>actually</u> and <u>relatively</u> easier for the children.

The results suggest that the blind children in this study tend to be more docile, have less initiative, are less active and outgoing, are more introverted, and possibly more cooperative than the partially seeing children. It is to be noted also that, on the whole, the differences found to exist between the blind and the partially seeing children follow the pattern of behavior which appeared in the comparative study of the total visually handicapped group and the normal seeing children as shown by the Scale.

As an additional check on this, the larger groups of 46 partially seeing and 46 blind children were compared as to rank order of difficulty for each item, in order to see whether or not the results would be consistent with those found for the matched groups. In each case the difference was in the same direction as for the matched groups. Furthermore, there were only 5 additional items upon which the larger groups differed by more than 5 points in order of difficulty. Three of these, 12, 13, and 14 were below the one-year level and thus were not included in the lists although the scores actually differed by more than 5 points. The other two, items 52 and 63, showed differences of only 4 points and so were not included in the lists.

A comparison of the data in Tables 3 and 6 (which are not presented here) showed that the larger groups differed considerably more in mean social quotient than did the matched groups. The means for the larger groups were 91.17 for the partially seeing and 75.91 for the blind, making a difference of 15.26. For the matched groups, the means for the partially seeing were 87.71 and for the blind 80.21, making a difference of 7.50. However, a larger difference is to be expected with a larger and unmatched group.

It appears, then, that the results found for the larger groups were fairly consistent with those found for the matched groups. Both sets of data indicate that, on the average, the blind preschool child does differ from the partially seeing in certain respects.

The question next arises, if the blind and partially seeing differ from each other on certain items, do they differ from the normal seeing child on the same items and in the same way? The order of difficulty of the 77 items for the 46 blind children was compared with that of the Scale and, likewise, the order of difficulty for the 46 partially seeing children was similarly compared, in order to see whether the differences for the two handicapped groups occurred on the same items and in the same direction.

These comparisons revealed that there were 34 items out of the 77 on which the blind children differed from the Scale as standardized for normal seeing children by 5 points or more in order of difficulty. The partially seeing children differed from the Scale in the same direction on 29 of these items. There were 28 items on which the partially seeing differed from the Scale by 5 points or more in order of difficulty. The blind differed in the same direction on 26 of these. The two groups differed from the Scale by 5 points or more in opposite directions on only one item (Number 49).

It appears, then, that with few exceptions those items which were relatively more difficult for the blind were also relatively more difficult for the partially seeing. In other words, the differences in

behavior so far as they are measured by this test are largely differences in degree.

3. Tentative age norms for visually handicapped preschool children. The evidence suggests that separate standardization might well be made for the blind and partially seeing, but the present data are quite insufficient for this. However in view of the fact that for the most part the blind and the partially seeing tend to differ from the normal on the same items and in the same direction, and in view of the fact that both groups show extreme variability, it seemed worth while to use the total group of 92 subjects for the purpose of working out tentative norms for the visually handicapped, regardless of degree of sight, on each of the items upon which there was a usable amount of data. This meant that it was necessary to have a fair number of cases at each age level down to the age where one could be reasonably sure that the next lower age level would bring approximately 100 per cent of passes and up to that age where one could be reasonably sure that the next age level would bring approximately 100 per cent of failures.

The Thompson method of calibration was used here, as in the original standardization of the Scale (6). Age norms were found for 32 items, as shown in Table 7. In each case it seemed reasonably certain that approximately 100 per cent of the visually handicapped children below the age of one year would fail and that approximately 100 per cent above 7 years would pass the item. It will be noticed that no item below 15 and none above 52 was used. Furthermore, some of the intervening items were omitted because the available data concerning them did not meet the criteria. It should be emphasized that these age norms are extremely tentative because of the relatively small number of children at certain age levels and because of the unequal distribution of the blind and partially seeing at the different age levels. The 2-3 year level was particularly inadequate with only 9 subjects, of whom all were blind except one. Any age norms for visually handicapped children should be used with great caution because of the amount of diversity among the children and the limited numbers available at a given age level for standardizing purposes. They have been presented here in the hope that they may furnish the incentive for further study and the development of more accurate norms.

B. Longitudinal Results

Among the children whose records were used in the preceding section, there were 31 upon whom 3 or more recordings had been made at approximately 3-month intervals. In order to obtain a further check on the value of the Scale as a developmental measure, these 31 subjects were used for a longitudinal study. Since there were only 3 recordings for some of these children and an uneven number for the others, only 3 recordings were used for each of them. Because of the small number of subjects this longitudinal study did not prove to be sufficiently enlightening to warrant publication of the results in this article.

However, on the whole, it can be said that while individual items did reflect progress on the successive recordings, they varied considerably from item to item as to the amount and consistency of progress shown. An adequate longitudinal study of this type would require a much

TABLE 7

TENTATIVE AGE NORMS FOR THIRTY-TWO ITEMS AS FOUND FOR VISUALLY HANDICAPPED PRESCHOOL CHILDREN

| Scale Age Level | Item Number | Age Norm Handicapped | Scale Age Level | Item Number | Age Norm Handicapped |
|---|---|---|---|---|---|
| 0 - 1 | 15 | 1.8 | 2 - 3 | 35 | 3.1 |
| | | | | 36 | 2.7 |
| 1 - 2 | 18 | 2.0 | | 37 | 3.2 |
| | 21 | 2.0 | | 38 | 4.5 |
| | 22 | 2.6 | | 39 | 4.1 |
| | 24 | 2.8 | | 40 | 3.6 |
| | 25 | 2.4 | | 41 | 3.0 |
| | 26 | 1.9 | | 42 | 4.3 |
| | 27 | 2.0 | | 44 | 3.8 |
| | 28 | 2.9 | | | |
| | 29 | 2.2 | 3 - 4 | 45 | 3.9 |
| | 30 | 2.2 | | 46 | 4.3 |
| | 31 | 2.3 | | 47 | 4.7 |
| | 32 | 2.5 | | 48 | 4.3 |
| | 33 | 3.5 | | 49 | 4.6 |
| | 34 | 2.5 | | 50 | 3.8 |
| | | | 4 - 5 | 51 | 4.7 |
| | | | | 52 | 4.5 |

larger number of subjects studied over a longer period of time with preferably separate treatment of the data for the blind and the partially seeing.

## II. Case Histories for Seventeen Children

The full report gives the detailed case histories of 17 children for whom ample data were available. This material not only furnished considerable information with regard to each child's behavior but also concerning factors relating to his health and to various situations causing emotional disturbances. Such records, made by teachers, nurses, and trained observers over a period of time, served as a valuable criterion of the validity of the scores on the Vineland Social Maturity Scale taken over the same period.

The 17 case histories which were presented in the full report showed in general very close agreement between the behavior notes and the trends indicated by the Social Maturity scores. This is especially noteworthy since the cases covered a wide range in general behavior level and variations in developmental trends from rapid progress to actual retrogression.

A number of factors appear to have affected the level of the SQ. Among the most important seemed to be health, specialized training, and general environment. Improved vision appeared to be an important factor in two cases and of possible significance in two others. Deep seated emotional disturbances appeared to play definite roles in lowering the SQ at specific periods in the development of three cases.

However, the general tendency for the SQ to rise during the child's stay at the Home would seem to indicate that training is an important factor in the Social Maturity of the visually handicapped child as measured by the Vineland Social Maturity Scale. This increase in SQ occurred in all except the very low grade cases and that of one child whose SQ dropped 17 points over a period of approximately 6 months due to a serious eye condition. In some cases this improvement was attributed, in part, to improved health or improved vision or both, but in others there was little change in health or vision. Dr. Doll suggests the possibility that the improvement in SQ of the various children may have been due to delayed development owing to lack of vision. There is little doubt that this may have been a factor in certain instances. However, it seems likely in the cases studied that much of this delay in development could have been avoided by special training at an earlier period in the life of the child.

Some of the children showed definite limitations and thus a tendency for the SQ curve to level off even under continued intensive training. No doubt this would have been true in all cases if the training had continued long enough. In the very low-grade cases there was a tendency toward retrogression after a long period of intensive training. This retrogression on the part of the very retarded subjects may indicate that the intensive training was too great a strain and finally proved to have a disintegrating effect.

It would be impossible to say to what extent a given SQ is dependent upon natural ability and to what extent it is dependent upon training. It seems a fair assumption that the visually handicapped child is much more dependent upon training than is the seeing child. The ordinary environment and the usual methods of training are far more adequate and stimulating to the seeing than to the blind baby. Consequently the blind baby is likely to sink into a kind of vegetative state if no special effort is made to arouse his interest in his environment. This is somewhat true, but to a much less degree, of the partially seeing infant.

## III. Further Evaluation of Individual Items

In the full report there is an exhaustive analysis of each item in terms of its probable fairness to blind and low visioned children under school age. Much of this analysis is based on the experience which the investigators have acquired as a result of working not only with the children in this study but with others in their own homes over a period of years. Constant reference was made to data accumulated by the present investigation.

The necessity for this evaluation lay in the need for working out a tentative adaption of the Vineland Social Maturity Scale for use with these children. There were two somewhat different objectives in attempting to revise the Scale. It was hoped that a scale might be evolved which would be adequate both for the comparison of the visually handicapped with the seeing in regard to social competence and for comparison of the visually handicapped among themselves. It is conceivable that a scale might be admirably adapted to the one and yet quite inadequate to the other use. Only the summaries presented for each year-group of

items to years VII - VIII are given here.

O-I

With few exceptions the items below the one-year level appear to be useful for measuring the development of visually handicapped children. The chief difficulty found in the practical application of this part of the Scale is that the steps are too large. Visually handicapped babies make less rapid progress at this stage and there are definite in-between stages of progress particularly in motor development which appear to be more significant for the visually handicapped than for the normal seeing infant. Specific suggestions along this line will be made in the section on suggested revisions of the Scale.

I-II

All the items at the one-to-two year level have been found to be useful for work with the visually handicapped except 19, 26, 27, and 30. Some of the other items need redefining or splitting up into two separate items, and some in-between steps should be added.

II-III

Two of the items at this age level, 41 and 43, are of doubtful value for use with visually handicapped children. Forty-one might be useful if redefined and another item added. Both items 36 and 38 need redefining and at least one Dressing item should be added.

III-IV

Five of the 6 items at this age level have been found useful. Two, 45 and 47, were found to have definite limitations and one item, 46, needed rewording and redefining.

IV-V

It has been found that one item, 53, needs redefining and that two items, 55 and 56, penalize the visually handicapped children too severely without offering an adequate measure of their progress. Other items should be added which would measure the development of these children in Occupation and Socialization.

V-VI

With the possible exception of Item 57, the items at the 5-to 6-year level have been practically useless for measuring the development of this group of visually handicapped children.

VI-VII

Two (62 and 64) of the items at this age level appear to be useful

and the other two, 63 and 65, inadequate for use with the visually handicapped.

No adaption is attempted beyond the year-group V-VI.

The following paragraphs discuss more specific revision which might improve the usefulness of the Scale for work with visually handicapped children. It is likely that some of the difficulties encountered in the use of the Scale with the visually handicapped have also been experienced in its use with the seeing. No doubt the revision of the Scale upon which Doctor Doll is now working will resolve many of these difficulties.

The Scale as presented here is in extremely tentative form and is set up with the hope that it may be used in the near future with a sufficient number of visually handicapped children so that it can be put into more permanent form. It cannot be too strongly emphasized that none of the revisions of original items and none of the new items have been even tentatively standardized on visually handicapped children. That would require another extended project. In other words, the revision is merely ready to be tried out.

The need for certain types of revision for use with visually handicapped preschool children has been revealed by the quantitative data and by the experience of those working with the Scale in connection with visually handicapped children. It should be pointed out that the increase in number of items representing smaller steps in development, and tapping a somewhat greater variety of behavior areas, may in the end yield only negligibly different total scores and yet may prove invaluable for diagnostic purposes. The suggested revisions have come in part from the study of seeing children by Gesell et al. (9). Others have come from an infant schedule mentioned in an earlier article (8) which was used for three or four years in the Arthur Home and revised a number of times according to need. Still others were based upon the more general observation and experience of those working with the Scale.

No attempt has been made to revise the order of the original items on the basis of order of difficulty found for the 92 visually handicapped children constituting the principal group in this study. There has been no attempt at revision beyond the 5 to 6-year level, since little material was available beyond that point.

The general organization as to categories and age levels of the original Scale has been adhered to. The items have been numbered consecutively throughout, with a letter following to indicate the category to which each item belongs. The various categories are designated as follows:

| | | | | | |
|---|---|---|---|---|---|
| Self Help: | General - G | Locomotion | - L | Self-Direction | - S-D |
| | Eating - E | Occupation | - O | Socialization | - S |
| | Dressing - D | Communication | - C | | |

The letters and numbers in parenthesis preceding the items should be interpreted as follows: (N) indicates that the item is new, in that it does not appear in the original Scale; a number followed by the letter R, as (6R) indicates that the item does occur in the original Scale but has been revised in some way either as to definition or wording, or has been otherwise changed; a number alone, as (15) indicates that the item has been used without modification. The description and definition of the items have been included in all cases of new and redefined items.

THE VINELAND SOCIAL MATURITY SCALE AS TENTATIVELY REVISED
FOR USE WITH VISUALLY HANDICAPPED PRESCHOOL CHILDREN

0 - I

(N) 1/G. Turns head from side to side.
Turns head from side to side when in prone position.

(1) 2/C. "Crows"; laughs.

(2) 3/G. Balances head.

(N) 4/G. Grasps objects upon contact.
Will grasp and hold small objects when they come in contact with his hand.

(3) 5/G. Grasps objects within reach.

(4R) 6/S. Responds to human beings.
Responds to presence of nurse or parents by wriggling, gurgling or otherwise showing desire for being picked up and pleasure at being held or cuddled.

(5) 7/G. Rolls over.

(N) 8/G. Attempts to regain lost objects.
Makes definite effort to reach out for desired objects which have slipped from grasp but which are still in contact.

(6R) 9/G. Reaches for nearby objects.
Attempts to obtain objects which are slightly beyond reach, of which he is aware through some sensory stimulation-visual, auditory, olfactory or tactual-kinaesthetic (vibration).

(N) 10/0. Accepts objects when offered.
Will take and hold object for short time when it is placed in hand.

(7R) 11/0. Occupies self unattended.
*a. Plays with objects three or more minutes.
Bangs, shakes, feels or otherwise plays with object more than momentarily.

b. Amuses self with one or more objects for periods as long as 15 minutes.

(N) 12/0. Shows some choice of objects.
Shows preference in toys. Plays more consistently with some than with others. May show pleasure when given some toys and indifference toward or rejection of others.

(8R) 13/G. Sits unsupported with back straight.
a. Ten seconds or more. Sits voluntarily with back straight on firm flat surface without support, for 10 seconds or more.
b. Several minutes.
Same as a. except for extended time.

(9R) 14/G. Pulls self to standing position.
a. Makes definite attempt. Pulls self to standing position when adult is assisting by holding under arms, to both hands, or to clothing, etc.
b. Holding to crib or other object. Comes to standing position by holding to some object (not a person).

*In each case where an item has been divided into two parts it is assumed that each could carry the weight of one-half point. However, this would necessarily be determined by data obtained when the revised scale was tried out.

(N) 15/G. Lowers self from standing to sitting position. Comes to sitting from standing position without falling and without assistance from another person. May help self by holding to objects.

(10) 16/C. "Talks"; imitates sounds.

(11R) 17/E. Drinks from cup or glass assisted.
a. Adult holding glass.
Accepts liquid from glass rather than bottle. Glass may be held entirely by adult but infant is able to drink from it without much spilling.
b. Helps to hold glass.
The child holds glass but cannot be depended upon to retain his grasp.

(12R) 18/L. Moves about on floor.
Moves about in one fashion or another, creeping, pulling himself about in sitting position or even sliding around in an almost prone position or hitching along in a backward direction.

(13) 19/G. Grasps with thumb and finger.

(N) 20/G. Releases objects.
a. Releases with contact.
Is able to transfer small object from one hand to the other or to release it against a resisting surface as a table top or floor.
b. Drops objects voluntarily.
Can voluntarily release object in mid-air without touching any surface.

(14) 21/S. Demands personal attention.

(N) 22/L. Walks sideways when holding to pen or furniture.
Takes steps sideways without assistance of person but holding on to crib, pen, wall, furniture, etc.

(N) 23/L. Walks assisted.
a. Walks forward when held by both hands.
Takes steps forward when assisted by person holding both hands or given support on both sides. Child holds much of his own weight but does not balance.
b. Walks with slight assistance.
Has almost attained balance and independent control but is unable to go alone either through lack of confidence or actual physical inability. May be helped by adult holding one hand, by harness fastened about the waist having reins which may be held lightly by adult. Sometimes merely holding the child slightly by the clothing at the back of the neck will give him confidence. Any method might be used which gave only slight physical support but which would serve to give confidence to the child.

(15) 24/G. Stands alone.

(16) 25/E. Does not drool.

(17R) 26/C. Follows simple instructions.
a. Inhibits on command.
Will inhibit certain simple acts upon simple familiar command.
b. Makes positive response to command.
Can perform simple pantomime like pat-a-cake, hand a toy, shake a rattle, or come to a person on command.

I - II

(18R) 27/L. Walks alone.
a. Few steps.
Takes a few steps (four or more) unassisted and unsupported by person or object.
b. Across room.
Walks without assistance or support approximately the distance of the width of an ordinary room.

(N) 28/0. Examines objects with interest.
Begins to show curiosity about objects in his environment as demonstrated by fairly intent examination either by feeling, tasting or "trying out" in various ways.

(N) 29/0. Responds to sounds.
Makes definite response to various sounds such as bells, whistle, etc.

(N) 30/0. Manipulates objects.
Works movable parts of objects, as hinged box top, a toy with movable parts, removable lid on a box or can.

(N) 31/D. Cooperates in dressing.
Finds large arm-holes and in general cooperates in dressing.

(20) 32/E. Masticates food.

(N) 33/D. Removes mittens and cap.
Is able to remove mittens and cap when unfastened and not too tight. Does so as an act of undressing and not just in play.

(21R) 34/D. Pulls off socks or shoes.
Removes socks or shoes when unfastened if not too tight. Does so as an act of undressing and not merely in play.

(22R) 35/0. Transfers objects.
a. Places objects.
Picks up and puts down objects definitely rather than merely dropping them.
b. Arranges objects.
Arranges objects with relation to each other. May be somewhat disorganized piles or groups. Carries objects around. May use push or pull toys.

(N) 36/0. Responds to music.
Makes general body response to rhythm. May hum or sing.

(23R) 37/G. Solves problems.
a. Overcomes very simple obstacles.
Can push small chairs or other small objects out of the way, back walker or kiddie-kar, when he runs into large object, or solve other simple problems.
b. Uses intermediary objects.
Climbs on stools, chairs or boxes to reach; uses stick as implement, etc.

(23R) 38/G. Uses receptacle for carrying.
Uses basket or other receptacle for carrying small objects from one place to another, or for transporting sand or water.

(24R) 39/0. Fetches or carries familiar objects.
a. Across room.
Will carry familiar object across room from one person to another if object is in hand.

b. From one room to another.
Will carry familiar object from one person in one room to person in another familiar room.

(25R) 40/E. Drinks from cup or glass.
a. Holds glass with supervision.
Can hold glass while drinking but may drop it instead of replacing it on table.
b. Holds cup unassisted.
Handles cup or glass well and can replace on table.

(27R) 41/S. Plays with other children.
Parallel play but obviously enjoys being with other children. Only slight give and take. Some attempt to defend own rights. May be considerable snatch and grab.

(28R) 42/E. Eats with spoon.
a. Assisted.
Shows definite attempt to feed self but food may be put on spoon and help given in guiding spoon to mouth.
b. Unassisted.
Uses spoon without help and with moderate spilling.

(29R) 43/L. Goes about house or yard.
a. Holding to walls or other objects.
Independent of other people; may cling to objects for security and finding way about, but goes about house or yard alone. May have to be watched from a distance to assure his keeping out of mischief or danger.
b. Walks about freely.
Walks about freely in house and yard with only occasional use of objects as guides.

(N) 44/C. Says two or more words.
Must be words which have definite meaning for the child.

(N) 45/C. Indicates needs or desires through language and gesture.
Indicates some needs or desires such as food, toilet or drink through the use of language and gesture.

(31) 46/C. Uses names of familiar objects.

(32R) 47/L. Walks upstairs.
a. Assisted.
May require considerable encouragement and be physically helped by holding one hand, or dress or by slight boost on the buttocks, but child holds rail and definitely attempts to step and pull himself up in upright position.
b. Unassisted.
May be accompanied and encouraged but not physically helped. May hold to rail.

(32R) 48/L. Walks upstairs unaccompanied.
Walks upstairs "on his own." Must walk, not creep. May hold to rail.

(34) 49/C. Talks in short sentences.

II - III

(N) 50/D. Helps with panties.
Makes definite effort to pull up or push down panties, if not fastened, as an act of undressing or when going to the toilet.

(35) 51/G. Asks to go to toilet.

(36R) 52/O. Initiates own play activities.
Handles objects, exploring and examining them. Carries objects such as blocks around in containers, transports them in wagons and dumps them out. More prolonged and organized play than items 35 or 38. Plays very simply with dolls and teddy bear.

(N) 53/O. Interested in tactual qualities.
Touches and feels objects of various textures, exploratively, like fur, velvet, satin, etc.

(N) 54/O. Carries out constructive activity (substitute for 43). Manipulates materials such as clay, bread dough, mud-pounding, rolling, poking and pulling pieces off. Uses peg board putting large pegs in without help. Uses hammer and large headed nails, hammering nails into soft surfaces.

(N) 55/S. Attends to stories.
Will listen attentively to short simple stories which have repetition and which have familiar characters.

(N) 56/C. Uses pronouns - - I, me, you.
Uses these pronouns with some understanding.

(37R) 57/D. Removes coat or simple garment.
Removes simple garment as coat or dress which opens clear down when unfastened, if not tight or in any way difficult to pull off.

(38R) 58/E. Eats with fork.
May use it much as he uses a spoon but is able to carry food to mouth with only moderate spilling.

(40R) 59/D. Dries own hands.
a. Goes through the motions.
Results not yet acceptable.
b. Acceptably.

(N) 60/C. Uses past tense and plural forms.
Makes correct use of both.

(41R) 61/G. Avoids simple hazards.
(Same as original with following addition) But does not show excessive timidity.

(42R) 62/D. Puts on coat or simple garment.
a. Assisted.
Can put it on if handed it in right position and helped slightly in getting started. Need not fasten.
b. Unassisted.
Same as original 42.

(44) 63/C. Relates experiences.

III - IV

(N) 64/L. Jumps with both feet.
Jumps from low box or off of bottom step with both feet.

(45R) 65/L. Walks downstairs one step per tread.
Walks down without help, placing a given foot on alternate steps. In other words,

does not step down with one foot and then bring the other foot down placing it on the same step.

(46R) 66/S. Cooperative play at pre-school level.
Plays in small groups of two or three. Is beginning to cooperate in various ways, as rocking boat, doing things together, willing to wait turn. Plays circle games. Participates with group in rhythms.

(N) 67/D. Unbuttons front and side buttons.
Undoes all front and side buttons if not excessively small.

(47R) 68/D. Buttons front and side buttons.
Buttons all front and side buttons if relatively large unless buttonholes are too small or buttons are particularly difficult because of shape or for some reason are hard to get at.

(48) 69/O. Helps at little household tasks.

(N) 70/O. Makes "pies", "cakes."
Makes forms with some approximation to that of objects represented, as pies, cakes, etc. May use mud, clay, sand, or other medium.

(50) 71/D. Washes hands unaided.

IV - V

(51) 72/G. Cares for self at toilet.

(52) 73/D. Washes face unassisted.

(53R) 74/L. Goes about neighborhood unattended.
Goes about immediate neighborhood unsupervised. "Immediate neighborhood" does not necessarily involve the crossing of streets. Knowledge of whereabouts and activities may be required and child may be restricted as to area.

(54) 75/D. Dresses self except tying.

(55R) 76/O. Uses pencil or crayon for drawing.
In addition to original definition the following activities should be given credit: The use of clay, mud or other medium to make recognizable forms, or the use of buttons, blocks, pegs or other materials to make well-defined designs.

(N) 77/S. Takes part in dramatic play.
Plays singing games, takes part in dramatized songs or stories.

(N) 78/S. Laughs at "funny" situations.
Responds to nonsense rhymes and funny stories. May create stories with silly language.

(N) 79/G. Skips.
Skips or hops on one foot with some proficiency. Not just one or two hops but across the room. May change from one foot to the other.

V - VI

(57) 80/O. Uses skates, sled, wagon.

(N) 81/S. Well adjusted to leaving familiar persons.
Leaves the home for school or other destination alone or with playmates without difficulty in parting from adult to whom he is emotionally attached.

(N) 82/O. Carries out extended projects.
Is interested in projects which carry over from day to day such as building structures to be used for special purposes as dramatic play. May make objects to be used for special purposes. These enterprises may be carried out alone or in groups. The child may need slight suggestions or supervision from adult but shows definite interest in completing what he starts.

(N) 83/S. Responds to competition.
Competes with other children of approximately same age and in same group.

(N) 84/S. Adjusts to formal situation.
Adjusts readily to group situations and to modern kindergarten regulations which require a certain amount of restraint, routine and conformity to rules. Can go with adult on short shopping tours, to make short calls, etc., without causing any great concern as to behavior.

(N) 85/C. Tells long story accurately.
Is able to tell a fairly long but simple story of two or three episodes which has been read or told to him at home or at school, getting the principal facts correct. If an imaginative child, may add to and change some of the details to suit his own fancy.

(N) 86/C. Asks questions of how and what and meanings of words.
Is interested in how things work, what they are for, and in the meanings of words.

(N) 87/L. Can cross streets.
Is trusted to cross streets alone where there is relatively little traffic. Watches for cars and obeys traffic lights when necessary.

## SUMMARY AND CONCLUSION

The chief purpose of this study was to further the development of an adequate scale for measuring the general social competence of visually handicapped preschool children. An attempt was made to ferret out specific types of behavior in which these children tend to be retarded.

The first 77 items of the Vineland Social Maturity Scale, including years from zero through ten, were used as the basis for the study. An intensive study was made of the scores of 101 visually handicapped children ranging in age from 9 months to 6 years and 10 months. The effect of differing degrees of blindness and of intelligence upon the total scores as well as upon the scores of individual items was investigated. Tentative age norms for visually handicapped children were obtained for 32 items, as many as was possible with the existing data.

The validity of the scale was checked against the case histories of 17 visually handicapped preschool children for each of whom a series of Social Maturity recordings had been obtained and for whom there were behavior notes and records of physical conditions and emotional factors.

An evaluation of individual items was made on the basis of all available material, and finally a tentative series of 87 items was suggested as the basis for a new study. Twenty of these were taken from the Vineland Social Maturity Scale without revision, 31 with revision; 36 were new items taken from various sources and from the experience of the investigators with visually handicapped children.

In conclusion, (1) The Vineland Social Maturity Scale was found to have considerable value for work with visually handicapped preschool children: (2) A few items were found to be of little value, and others needed revision for work with these children; (3) There appeared to be a need for additional items representing smaller steps of progress, and also for items tapping other types of behavior; (4) The results definitely indicated that these children, as a group, were retarded on specific items, and (5) These visually handicapped children, on the average, appeared to be more docile, less active, and have less initiative than seeing children of corresponding ages. This behavior pattern was more striking in the blind than in the partially seeing.

The present article is published in the hope that clinicians will be willing to try the two scales with whatever visually handicapped children may come to their attention and that they will then notify the authors of the results. Cooperation in the evaluation of this adaptation will be greatly appreciated. Mimeographed copies of the tentative adaptation may be obtained upon request from Kathryn E. Maxfield, 40 East 61st Street, New York City.

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